

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference 11502/32 PCT	FOR FURTHER ACTION	See item 4 below
International application No. PCT/US2005/010469	International filing date (<i>day/month/year</i>) 28 March 2005 (28.03.2005)	Priority date (<i>day/month/year</i>) 26 March 2004 (26.03.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant INTEGRATED VASCULAR INTERVENTIONAL TECHNOLOGIES, LC		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> .1(a).																								
2.	This REPORT consists of a total of 4 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 60%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
<input checked="" type="checkbox"/>	Box No. I	Basis of the report																							
<input type="checkbox"/>	Box No. II	Priority																							
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																							
<input type="checkbox"/>	Box No. IV	Lack of unity of invention																							
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																							
<input type="checkbox"/>	Box No. VI	Certain documents cited																							
<input type="checkbox"/>	Box No. VII	Certain defects in the international application																							
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application																							
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44 <i>bis</i> .3(c) and 93 <i>bis</i> .1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44 <i>bis</i> .2).																								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Date of issuance of this report 05 June 2007 (05.06.2007) Authorized officer <p style="text-align: center; font-size: 1.2em;">Nora Lindner</p> e-mail: pt02.pct@wipo.int
Facsimile No. +41 22 338 82 70	

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:
KEVIN B. LAURENCE
STOEL RIVES LLP
ONE UTAH CENTER
201 SO. MAIN STREET, SUITE 1100
SALT LAKE CITY, UT 84111

Date of mailing
(day/month/year) **21 MAY 2007**

Applicant's or agent's file reference

11502/32 PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US05/10469

International filing date (day/month/year)

28 March 2005 (28.03.2005)

Priority date (day/month/year)

26 March 2004 (26.03.2004)

International Patent Classification (IPC) or both national classification and IPC

IPC: **A61B 17/08**(2006.01);**A61F 2/06**(2006.01)

USPC: 606/151,153;623/1.13

Applicant

INTEGRATED VASCULAR INTERVENTIONAL TECHNOLOGIES

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Date of completion of this opinion

22 April 2007 (22.04.2007)

Authorized officer

Darwin P. Erez

Telephone No. 703-308-0858

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US05/10469

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
- ☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US05/10469

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>6, 15-18, 22-25 and 49-51</u>	YES
	Claims <u>1-5, 7-14, 19-21 and 26-48</u>	NO
Inventive step (IS)	Claims <u>6 and 49-51</u>	YES
	Claims <u>1-5 and 7-48</u>	NO
Industrial applicability (IA)	Claims <u>1-51</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Claims 1-5, 7-14, 19-21 and 26-48 lack novelty under PCT Article 33(2) as being anticipated by US 6,428,550 to Vargas et al.

(claim 1-5, 7-11 and 30-40) Vargas discloses a method for connecting a vessel to another vessel comprising obtaining a graft **30**, a stent **10** attached to said graft; anastomosing the first end of the graft vessel to a side of a first vessel **32**, and anastomosing the second end of the graft vessel to a second vessel, wherein the device comprises two rings **20,22**; wherein the stent is attached to the graft vessel; wherein an operator having a cutting means **152** for cutting the first vessel.

(claims 12-14, 19-21, 26-29 and 41-48) Vargas discloses a graft vessel device comprising a graft vessel **30**; an anastomosis device **20,22**; and a stent **10**, wherein the stent is attached to the exterior of the graft vessel; and an obturator comprising a cutting element **152**.

Claims 15-18 and 22-25 lack an inventive step under PCT Article 33(3) as being obvious over Vargas et al.

Vargas is silent with regards to suture, adhesives or polymeric substances for adhering the stent to the graft vessel. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use either a suture, adhesive or polymeric substance to secure the stent to the graft vessel because the use of such means would reinforce the connection between the stent and the graft vessel. Moreover, the use of such items are well known in the art.

Claims 6 and 49-51 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest an anastomosis method comprising, inter alia, applying a second amount of force to the first vessel ring to eject the first vessel ring from the ring retainer, wherein the second amount of force is greater than the first amount of force a first vessel ring having an everted portion of a first vessel, a second vessel having an everted portion of a second vessel. The prior art also fails to teach the use of a tear-away sheath to secure the second end of the graft vessel to second vessel.

Claims 1-51 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.